



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/838,200 | 04/20/2001 | Li Yao | 9580-030-999 | 9401 |

7590

12/19/2002

PENNIE & EDMONDS LLP
COUNSELLORS AT LAW
1667 K Street, N.W.
Washington, DC 20006

EXAMINER

SALVATORE, LYNDIA

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 12/19/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,200

Applicant(s)

YAO ET AL.

Examiner

Lynda M Salvatore

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4,8,9 and 13-18 are rejected under 35 U.S.C. 102(b) as anticipated by Tabor et al., US 5,372,885.

The patent issued to Tabor et al., discloses a thermoplastic bicomponent fiber comprising a first thermoplastic component of PET, PBT, or nylon and a second thermoplastic component of a olefinic polymer such as polypropylene (Abstract and Column 5, 47-50). Tabor et al., teaches that the bicomponent fibers have excellent adhesive properties and may be formed into various shapes such as oval, trilobal, or hollow (Column 4, 43-50). Tabor et al., further teaches that the thermoplastic bicomponent fibers have a variety of applications such as for use as a binder fiber with natural and synthetic performance fibers such as hydrophilic cellulose (Column 8, 54-59). The bicomponent fibers may also be employed in conventional textile processing techniques such as carding, which inherently includes staple fibers oriented in the same direction (Column 8, 45-50). In addition, Tabor et al., further discloses that when preparing non-woven fabrics from staple bicomponent fiber/performance fibers there should be no fusing of the fibers when they are cut into staple, and the crimp imparted to the binder fibers should be sufficient for blending with the performance fibers to obtain a good fiber distribution (Column 9, 10-17). When blending fibers, the amount of binder fiber employed should be from about 5 to 95 weight

Art Unit: 1771

percent, more preferably about 5 to 50 weight percent, and especially, 5 to 15 weight percent (Column 9, 5-9).

3. Claims 1-4,8, 9,13-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuypers et al., US 5,577,494.

The patent issued to Kuypers et al., teaches a heat and moisture exchange media in the form of a fibrous non-woven material (Column 2, 20-22). The fibrous non-woven comprises about 5 to 50 weight percent of superabsorbent fibers and bonding matrix fibers (Column 2, 25-30). The fibrous non-woven may optionally comprise a binding fiber, which may function as the matrix fiber (Column 3, 24-29). Suitable matrix fibers may include cellulose, rayon, and polyester fibers. The superabsorbent fiber may include polyacrylonitriles co-spun with superabsorbent polymers such as acrylate/acrylonitrile copolymers, and crosslinked polyacrylate (Column 3, 50-55). The bonding fiber may be a bicomponent fiber such as polyester/polyolefin fibers where the polyolefin is a lower melting point polypropylene or polyethylene copolymer (Column 4, 20-25). Kuypers et al., teaches that bonding fibers are typically used in amounts ranging from 0 to 100 weight percent (Column 4, 50-55). Kuypers et al., does not explicitly teach using staple fibers, however, he does teach that the fibrous non-woven can be formed by any conventional wet or dry lay method, including carding (Column 5, 54-59). As such, it is reasonable to conclude that the fibers are staple fibers since carding can only process staple length fibers.

4. Claims 1-3,8,9,13-16, 28-31 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kean et al., US 6,159,882.

The patent issued to Kean et al., teaches a non-woven web comprising supporting fibers and bicomponent binding fibers (Column 2, 35-39 and Column 3, 33-35). The amount of supporting fiber ranges from 65 to 95 weight percent (Column 1, 56-61). Suitable supporting fibers include mineral fibers such as glass, and synthetic fibers such as nylon (Column 2, 35-60). Kean teaches orienting a substantial portion of the fibers in the web, in a direction normal or perpendicular to the major plane of the web, resulting in a higher tensile strength (Column 2, 26-34). The preferred length of the fibers ranges from 1/8 to 4 inches (Column 2, 44-66). The amount of binder fiber ranges from 5 to 35 weight percent (Column 3, 20-25). Suitable bicomponent binder fibers include those having a copolyolefin sheath and a polyester core (Column 3, 34-40).

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tabor et al., US 5,372,885 as applied to claim 8 above.

With regard to claims 10-12, although Tabor et al., fails to explicitly teach the wicking rate of the non-woven comprising binder and performance fibers, it is reasonable to presume that said property is inherent to the invention of Tabor et al. Support for this presumption is found in

Art Unit: 1771

the use of like materials (i.e., such as thermoplastic binder staple fibers, especially those having a trilobal shape, which would inherently facilitate wicking), and the use of like processes such as carding (i.e., orients the fibers in one direction), which would result in the claimed wicking rate property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594

In addition, the presently claimed wicking property would have obviously been present once the Tabor et al., product is provided. *In re Best*, 195 USPQ 433

Claim Rejections - 35 USC § 103

7. Claims 32,33,35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kean et al., US 6,159,882 as applied to claims 28 and 31 above, and further in view of Tabor et al., US 5,372,885.

Kean et al., fails to teach a non-woven web comprising 45 to 95 weight percent of binder fiber, however, Tabor teaches when blending fibers, the amount of binder fiber employed should be from about 5 to 95 weight percent, more preferably about 5 to 50 weight percent, and especially, 5 to 15 weight percent (Column 9, 5-9).

Therefore, motivated to increase the stability of the non-woven web it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the binding fiber blending ratio taught by Tabor in the non-woven web of Kean et al.

8. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabor et al., US 5,372,885 as applied to claim 1 above, in view Sandler GMBH, Derwent Abstract Publication No. DE 19840050A.

Art Unit: 1771

Tabor et al., fails to disclose the density of the fibrous non-woven web, however, the German Abstract to Sandler teaches heat-bonded non-woven materials comprising a fiber mixture of bonding fibers and other fibers. The non-woven has a density in the range of .005 to .25 g/cm³. Sandler teaches that the heat-bonded non-woven is suitable for use in insulation, cladding with shape stability for land/air/water vehicles, or in building applications.

Therefore, motivated to provide a fibrous non-woven suitable for use in insulation or building applications, it would be obvious to one having ordinary skill in the art at the time the invention was made to form the non-woven webs of Tabor et al., in the density ranges taught by Sandler.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ls
December 16, 2002


CHERYL A. JUSKA
PRIMARY EXAMINER